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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,746	12/07/2001	Jeffrey Tallon	0074-451795	2959

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[REDACTED] EXAMINER

LE, HOA T

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1773

DATE MAILED: 08/27/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Offic Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/010,746	TALLON, JEFFREY	
	<b>Examiner</b> H. T. Le	<b>Art Unit</b> 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.

2a) This action is **FINAL**.                  2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-52 is/are pending in the application.

4a) Of the above claim(s) 38-52 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-37 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u> .	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of claims 1-37 in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Accordingly, claims 38-52 are withdrawn from further consideration as being drawn to a nonelected invention.
2. Claims 2-37 are objected to because of the following informalities: Line 1, the pronoun article "A" or "An" is grammatically incorrect. "A" or "An" should be changed to "The". The reason for it should be obvious. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The instant specification provides no description of "organic oxide" or of organic oxide with a corner-shared octahedra configuration.
4. Claims 18 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was

not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 18, the values of m and n in the formula as recited in claim 18 are not defined.

In claim 33, the specification fails to provide the structures or definitions of “replacing ammonium [sic] groups”, “field-effect injected electrons” or “field-effect injection electron holes”. Thus it’s unclear how these materials can function as dopants in the claimed layered organic-inorganic oxide.

5. Claims 1-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the phrase at lines 5-6 is queried because it is confusing. Should “alternate” (second occurrence) be deleted?

In claim 3, the term “such as” renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 9 is in conflict with claim 8 upon which it depends. Claim 8 defines m as being equal to one, but claim 9 define m as two. Line 9, “organic oxide” has no antecedent basis.

In claim 18, n and m of the recited formula are not defined, thus the claim is indefinite.

In claim 19, “aromatic rings” has no antecedent basis.

Claim 20 is deemed indefinite in view of its dependency upon claim 19.

In claim 29, “aromatic ring” has no antecedent basis.

In claim 30, “aromatic rings” has no antecedent basis.

In claim 33, it’s unclear what “replacing” in the recited “replacing ammonium groups” is intended to mean. Further, “ammonium” has been misspelled.

In claim 37, “Mo<sub>4</sub>” (tetra-molybdenum?) is queried. Is it intended to be “MO<sub>4</sub>” (metal oxide)?

Other claims are deemed indefinite in view of their dependency upon claim 1.

### *Allowable Subject Matter*

6. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.
7. Claims 2-8, 10-17, 19-32, and 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter:  
None of the references of record, singly or in combination, teach or suggest the specific layered organic-inorganic layered material having metal oxide layers and periodic planar structure between the metal-oxide layers and the organic layers as claimed.
9. References are cited as art of interest.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 703-308-2415. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Friday.



H. T. Le  
Primary Examiner  
Art Unit 1773

hl